



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0725; Project Identifier MCAI-2020-01402-T; Amendment 39-21882; AD 2021-26-23]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc., Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2017-22-06, which applied to certain Bombardier, Inc., Model CL-600-2B16 (601-3A, 601-3R, and 604 Variants) airplanes. AD 2017-22-06 required repetitive inspections for fuel leakage at the engine and auxiliary power unit (APU) fuel pumps, and related investigative and corrective actions if necessary. This AD retains the requirements of AD 2017-22-06, and requires an inspection of the APU, repair if necessary, and modification of the engine electrical fuel pump (EFP) installation. This AD also adds airplanes to the applicability. This AD was prompted by reports of fuel leaks from the electrical connectors and conduits of the engine and APU EFP cartridge/canister, and the development of additional actions to address the root cause of the fuel leaks. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF

PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain other publications listed in this AD as of November 30, 2017 (82 FR 49498, October 26, 2017).

ADDRESSES: For service information identified in this final rule, contact Bombardier Business Aircraft Customer Response Center, 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 514-855-2999; email ac.yul@aero.bombardier.com; Internet <https://www.bombardier.com>. You may view this referenced service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0725.

Examining the AD Docket

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0725; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Steven Dzierzynski, Aerospace Engineer, Avionics and Electrical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7367; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued TCCA AD CF-2016-32R4, dated October 13, 2020 (TCCA AD CF-2016-32R4); and TCCA AD CF-2020-38, dated October 13, 2020 (TCCA AD CF-2020-38); (also referred to as the Mandatory Continuing Airworthiness Information, or the MCAI), to correct an unsafe condition for certain Bombardier, Inc., Model CL-600-2B16 (601-3A, 601-3R, and 604 Variants) airplanes. You may examine the MCAI in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0725.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2017-22-06, Amendment 39-19086 (82 FR 49498, October 26, 2017) (AD 2017-22-06). AD 2017-22-06 applied to certain Bombardier, Inc., Model CL-600-2B16 (601-3A, 601-3R, and 604 Variants) airplanes. The NPRM published in the *Federal Register* on September 8, 2021 (86 FR 50291). The NPRM was prompted by reports of fuel leaks from the electrical connectors and conduits of the engine APU EFP cartridge/canister, and the development of additional actions to address the root cause of the fuel leaks. The NPRM proposed to retain the requirements of AD 2017-22-06, and proposed to require an inspection of the APU, repair if necessary, and modification of the engine EFP installation. The NPRM also proposed to add airplanes to the applicability. The FAA is issuing this AD to address the potential for a fire hazard as a result of fuel leak from the APU EFP electrical conduit in the hot landing light compartment. See the MCAI for additional background information.

Comments

The FAA gave the public the opportunity to participate in developing this final rule. The following presents the comment received on the NPRM and the FAA's response to the comment.

Request to Use the Latest Service Information

An anonymous commenter requested that the FAA revise the NPRM to allow the use of the latest service bulletin. The commenter stated that the NPRM specifies the use of Bombardier Service Bulletin 604-28-024, dated June 16, 2020, for the actions specified in the NPRM, and that the service bulletin has since been revised to Bombardier Service Bulletin 604-28-024, Revision 1, dated May 28, 2021.

The FAA agrees with the commenter for the reasons provided above. Bombardier Service Bulletin 604-28-024, Revision 01, dated May 28, 2021, adds a figure to clarify the location of a certain drain hole. The service bulletin revision does not add work or affect the technical content of this AD. The FAA has revised the “Related Service Information under 1 CFR Part 51” paragraph and figure 2 to paragraph (j) of this AD accordingly. The FAA also has also added paragraph (m)(4) of this AD to allow credit for actions required by paragraph (j) of this AD if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 604-28-024, dated June 16, 2020.

Conclusion

The FAA reviewed the relevant data, considered the comment received, and determined that air safety and the public interest require adopting this final rule with the change described previously and minor editorial changes. The FAA has determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

The FAA also determined that these changes will not increase the economic burden on any operator or increase the scope of this final rule.

Related Service Information under 1 CFR Part 51

Bombardier has issued the following service information, which describes procedures for repetitive general visual inspections and rectifications for any fuel leak from the engine and APU EFP electrical wiring conduit outlets. These documents are distinct since they apply to different airplane serial numbers.

- Bombardier Service Bulletin 604-28-022, Revision 3, dated August 31, 2018.
- Bombardier Service Bulletin 605-28-010, Revision 3, dated August 31, 2018.
- Bombardier Service Bulletin 650-28-001, Revision 3, dated January 3, 2019.

Bombardier has also issued the following service information, which describes procedures for a detailed visual inspection of the APU for any damage or deformations (e.g., cut wires and a broken harness assembly of the fuel boost pump connector), modifying the engine EFP installation, and repair if necessary. These documents are distinct since they apply to different airplane serial numbers.

- Bombardier Service Bulletin 604-28-024, Revision 01, dated May 28, 2021.
- Bombardier Service Bulletin 605-28-012, dated June 16, 2020.
- Bombardier Service Bulletin 650-28-002, dated June 16, 2020.

This AD also requires Bombardier Service Bulletin 604-28-022, dated October 19, 2015, and Bombardier Service Bulletin 605-28-010, dated October 19, 2015, which the Director of the Federal Register approved for incorporation by reference as of November 30, 2017 (82 FR 49498, October 26, 2017).

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

The FAA estimates that this AD affects 128 airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

Estimated costs for required actions

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Retained actions from AD 2017-22-06 (for 121 airplanes)	1 work-hour X \$85 per hour = \$85	\$0	\$85 per inspection cycle	\$10,285 per inspection cycle
New actions	20 work-hours X \$85 per hour = \$1,700	\$1,768	\$3,468	\$443,904

The FAA estimates the following costs to do any necessary repair that would be required based on the results of any required actions. The FAA has no way of determining the number of aircraft that might need this repair:

Estimated costs of on-condition actions

Labor cost	Parts cost	Cost per product
5 work-hours X \$85 per hour = \$425	\$8,618	\$9,043

According to the manufacturer, some or all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators. The FAA does not control warranty coverage for affected operators. As a result, the FAA has included all known costs in the cost estimate.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by

prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by:

- a. Removing Airworthiness Directive (AD) 2017-22-06, Amendment 39-19086

(82 FR 49498, October 26, 2017); and

b. Adding the following new AD:

2021-21-23 Bombardier, Inc.: Amendment 39-21882; Docket No. FAA-2021-0725;
Project Identifier MCAI-2020-01402-T.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER
DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2017-22-06, Amendment 39-19086 (82 FR 49498, October
26, 2017) (AD 2017-22-06).

(c) Applicability

This AD applies to Bombardier, Inc., Model CL-600-2B16 (601-3A, 601-3R, and
604 Variants) airplanes, certificated in any category, serial numbers 5301 through 5665
inclusive, 5701 through 5990 inclusive, and 6050 through 6163 inclusive.

(d) Subject

Air Transport Association (ATA) of America Code 28, Fuel.

(e) Reason

This AD was prompted by reports of fuel leaks from the electrical connectors and
conduits of the engine and auxiliary power unit (APU) electrical fuel pump (EFP)
cartridge/canister, and the development of additional actions to address the root cause of
the fuel leaks. The FAA is issuing this AD to address the potential for a fire hazard as a
result of fuel leak from the APU EFP electrical conduit in the hot landing light
compartment.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Retained Actions for Certain Airplanes, with Revised Service Information and Method of Compliance Provisions

This paragraph restates the requirements of paragraph (g) of AD 2017-22-06, with revised service information and method of compliance provisions. For Model CL-600-2B16 airplanes having serial numbers 5301 through 5665 inclusive: Within 600 flight hours or 12 months, whichever occurs first after November 30, 2017 (the effective date of AD 2017-22-06), do the inspections specified in paragraphs (g)(1) through (3) of this AD, and do all applicable corrective actions, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 604-28-022, dated October 19, 2015, or Bombardier Service Bulletin 604-28-022, Revision 3, dated August 31, 2018. Do all applicable corrective actions before further flight. Repeat the inspections at intervals not to exceed 600 flight hours or 12 months, whichever occurs first. As the effective date of this AD, use Bombardier Service Bulletin 604-28-022, Revision 3, dated August 31, 2018, only.

(1) Do a general visual inspection for traces of fuel coming from the right-hand engine boost pump at the location of the belly fairing screw (FS412, BL 0.0).

(2) Do a general visual inspection for traces of fuel coming from the left-hand engine boost pump at the location of the belly fairing screw (FS412, BL 0.0).

(3) Do a general visual inspection for traces of fuel coming from the EFP electrical wiring conduit outlet at the lower body fairing area for engine EFPs and at the right-hand landing light compartment for the APU EFP.

(h) Retained Actions for Certain Other Airplanes, with Revised Service Information and Compliance Method Provisions

This paragraph restates the requirements of paragraph (h) of AD 2017-22-06, with revised service information and compliance method provisions. For Model CL-600-2B16 airplanes having serial numbers 5701 through 5955 inclusive, 5957, 5960 through 5966 inclusive, 5968 through 5971 inclusive, and 5981: Within 600 flight hours or 12 months,

whichever occurs first after November 30, 2017 (the effective date of AD 2017-22-06), do the inspections specified in paragraphs (h)(1) through (3) of this AD, and do all applicable related investigative and corrective actions, in accordance with the Accomplishment Instructions in Bombardier Service Bulletin 605-28-010, dated October 19, 2015, or Bombardier Service Bulletin 605-28-010, Revision 3, dated August 31, 2018. Do all applicable related investigative and corrective actions before further flight. Repeat the inspections at intervals not to exceed 600 flight hours or 12 months, whichever occurs first. As of the effective date of this AD, use Bombardier Service Bulletin 605-28-010, Revision 3, dated August 31, 2018, only.

(1) Do a general visual inspection for traces of fuel coming from the right-hand engine boost pump at the location of the belly fairing screw (FS412, BL 0.0).

(2) Do a general visual inspection for traces of fuel coming from the left-hand engine boost pump at the location of the belly fairing screw (FS412, BL 0.0).

(3) Do a general visual inspection of the right-hand landing light compartment for traces of fuel coming from the APU EFP.

(i) New Requirements of this AD: Inspections and Rectifications

For the airplanes identified in figure 1 to paragraph (i) of this AD: At the applicable compliance time specified in figure 1 to paragraph (i) of this AD, do a general visual inspection for any fuel leak from the engine and APU EFP electrical wiring conduit outlets, in accordance with the Accomplishment Instructions of the applicable service information specified in figure 1 to paragraph (i) of this AD. If any fuel leak is found during the general visual inspection, before further flight, correct the fuel leak in accordance with the Accomplishment Instructions of the applicable service information specified in figure 1 to paragraph (i) of this AD. Thereafter, repeat the general visual inspection at intervals not to exceed 600 flight hours or 12 months, whichever occurs first.

Figure 1 to paragraph (i) – Compliance Times and Service Information

Serial numbers–	Compliance Time–	Bombardier Service Bulletin–
5956, 5958, 5959, 5967, 5972 through 5980 inclusive, and 5982 through 5990 inclusive	Within 600 flight hours or 12 months, whichever occurs first after the effective date of this AD	Bombardier Service Bulletin 605-28-010, Revision 3, dated August 31, 2018
6050 through 6163 inclusive	Within 600 flight hours or 12 months, whichever occurs first after the effective date of this AD	Bombardier Service Bulletin 650-28-001, Revision 3, dated January 3, 2019

(j) New Requirements of this AD: Inspection and Modification

Within 60 months after the effective date of this AD: Do a detailed visual inspection of the APU for any damage or deformations, and modify the engine EFP installation, in accordance with the Accomplishment Instructions of the applicable service information specified in figure 2 to paragraph (j) of this AD. If any damage or deformations are found during the detailed visual inspection, before further flight, do the repair in accordance with the Accomplishment Instructions of the applicable service information specified in figure 2 to paragraph (j) of this AD.

Figure 2 to paragraph (j) – Service Information

Serial numbers–	Bombardier Service Bulletin–
5301 through 5665 inclusive	Bombardier Service Bulletin 604-28-024, Revision 01, dated May 28, 2021
5701 through 5990 inclusive	Bombardier Service Bulletin 605-28-012, dated June 16, 2020
6050 through 6163 inclusive	Bombardier Service Bulletin 650-28-002, dated June 16, 2020

(k) No Reporting Requirement

Where service information identified in this AD specifies to submit certain information to the manufacturer, this AD does not include that requirement.

(l) Terminating Actions

Accomplishing the actions required by paragraph (j) of this AD terminates all requirements of this AD.

(m) Credit for Previous Actions

(1) This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 604-28-022, dated October 19, 2015, provided that within 4 months or 150 flight hours from the effective date of this AD or within 1 year from the last inspection, whichever occurs first, the actions specified in paragraph (g) are done using Bombardier Service Bulletin 604-28-022, Revision 3, dated August 31, 2018. Bombardier Service Bulletin 604-28-022, dated October 19, 2015, was incorporated by reference in AD 2017-22-06.

(2) This paragraph provides credit for actions required by paragraph (h) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 605-28-010, dated October 19, 2015, provided that within 4 months or 150 flight hours from the effective date of this AD or within 1 year from the last inspection, whichever occurs first, the actions specified in paragraph (h) of this AD are done using Bombardier Service Bulletin 605-28-010, Revision 3, dated August 31, 2018. Bombardier Service Bulletin 605-28-010, dated October 19, 2015, was incorporated by reference in AD 2017-22-06.

(3) This paragraph provides credit for actions required by paragraph (i) of this AD, if those actions were performed before the effective date of this AD using the service information in paragraphs (m)(3)(i) through (iii) of this AD, provided that within 1 year from the last inspection, the actions accomplished in paragraph (i) of this AD are done using Bombardier Service Bulletin 650-28-001, Revision 3, dated January 3, 2019. This service information is not incorporated by reference in this AD.

- (i) Bombardier Service Bulletin 650-28-001, dated November 3, 2017.
- (ii) Bombardier Service Bulletin 650-28-001, Revision 1, dated May 14, 2018.
- (iii) Bombardier Service Bulletin 650-28-001, Revision 2, dated August 31, 2018.

(4) This paragraph provides credit for actions required by paragraph (j) of this AD, if those actions were performed before the effective date of this AD using Bombardier Service Bulletin 604-28-024, dated June 16, 2020. This service information is not incorporated by reference in this AD.

(n) Other FAA AD Provisions

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier, Inc.'s TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(o) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) TCCA AD CF-2016-32R4, dated October 13, 2020; and TCCA AD CF-2020-38, dated

October 13, 2020; for related information. This MCAI may be found in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0725.

(2) For more information about this AD, contact Steven Dzierzynski, Aerospace Engineer, Avionics and Electrical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7367; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov.

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (p)(5) and (6) of this AD.

(p) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(3) The following service information was approved for IBR on [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

- (i) Bombardier Service Bulletin 604-28-022, Revision 3, dated August 31, 2018.
- (ii) Bombardier Service Bulletin 604-28-024, Revision 01, dated May 28, 2021.
- (iii) Bombardier Service Bulletin 605-28-010, Revision 3, dated August 31, 2018.
- (iv) Bombardier Service Bulletin 605-28-012, dated June 16, 2020.
- (v) Bombardier Service Bulletin 650-28-001, Revision 3, dated January 3, 2019.
- (vi) Bombardier Service Bulletin 650-28-002, dated June 16, 2020.

(4) The following service information was approved for IBR on November 30, 2017 (82 FR 49498, October 26, 2017).

- (i) Bombardier Service Bulletin 604-28-022, dated October 19, 2015.

(ii) Bombardier Service Bulletin 605-28-010, dated October 19, 2015.

(5) For service information identified in this AD, contact Bombardier Business Aircraft Customer Response Center, 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 1-514-855-2999; email ac.yul@aero.bombardier.com; Internet <https://www.bombardier.com>.

(6) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(7) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fr.inspection@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on December 17, 2021.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2022-00993 Filed: 1/20/2022 8:45 am; Publication Date: 1/21/2022]